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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,821	06/11/2001	Gregory A. Fish	GC-122.3-US-U1	3464

7590 09/23/2002

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EXAMINER

LANDAU, MATTHEW C

ART UNIT	PAPER NUMBER
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2815

DATE MAILED: 09/23/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/879,821

Applicant(s)

FISH ET AL.

Examiner

Matthew Landau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figures 1 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method steps of selecting a preferred coupling constant and determining the average coupling constant must be shown or the features canceled from the claims. No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because the reference characters shown in the drawings are not mentioned in the description.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: the description of Figures 1 and 2 does not match the drawings.

Appropriate correction is required.

Double Patenting

3. Applicant is advised that should claim 8 be found allowable, claim 9 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 4-10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The method for configuring a selected grating distributed Bragg reflector, including the specific steps of: selecting a preferred coupling constant, selecting a preferred tuning range, generating a sampling function, and sampling the reflector; is not sufficiently supported by the specification. There is no explanation of how the aforementioned steps are to be accomplished, nor are any specific examples provided.

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6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said phase" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the coupling constant" in line 2. There is insufficient antecedent basis for this limitation in the claim. Furthermore, the limitation "as evenly as possible" renders the claim indefinite. It is unclear what is meant by the limitation maximizing the coupling constant evenly. It is also unclear how even a coupling constant would have to be to meet the limitation "as evenly as possible".

Claims 4 and 5 recites the limitations "the closest", "the desired average" and the smallest amount" in line 8. There is insufficient antecedent basis for these limitation in the claims. Furthermore, the metes and bounds of the claims cannot be determined due to the limitations "the closest fit" and "the smallest amount of variation". It is also unclear how the preferred coupling constant and tuning range are selected. It is further unclear how a sampling function is generated.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

9. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Reid et al. (US Pat. 6,345,135, hereinafter Reid).

In regards to claims 1 and 2, Figure 1 of Reid discloses an improved distributed Bragg reflector comprising: a first portion 24 comprising a first phase; at least a second portion 26 spaced apart from said first portion comprising a second phase. Reid discloses that adjacent grating (reflector) sections within a unit 20 are defined by phase shifts of π radians (180 degrees) (see column 4, lines 18-21). Therefore, the second phase is different from (and opposite of) the first phase.

In regards to claim 3, as best the examiner can ascertain the claimed invention, Figure 1 of Reid discloses the spaced apart first portion 24 and second portion 26 are configured to maximize the coupling constant as evenly as possible across a selected tuning range.

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10. Claims 4-10 are rejected under 35 U.S.C. 102(b) as being anticipated by B. Mason et al., "Sampled Grating DBR Lasers with 22nm Quasi-Continuous...", hereinafter referred to as Mason.

In regards to claim 4, as best the examiner can ascertain the claimed invention, Mason discloses a method for configuring a selected grating distributed Bragg reflector for use in a laser having an output within a specific region of bandwidth, the method comprising the steps of: selecting a preferred coupling constant, selecting a preferred tuning range, and generating sampling function (see Abstract).

In regards to claim 5, as best the examiner can ascertain the claimed invention, Mason discloses a method for configuring a selected grating distributed Bragg reflector for use in a laser having an output within a specific region of bandwidth, the method comprising the steps of: selecting a preferred tuning range, determining an average coupling constant, and generating a sampling function.

In regards to claims 6, 8, and 9, Mason discloses a plurality of output wavelengths (see Abstract).

In regards to claims 7 and 10, Mason discloses the step of sampling the reflector (see Section II, Device Design, lines 4-6).

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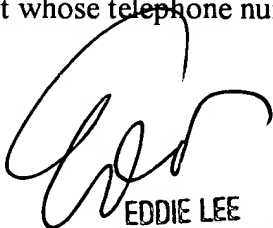
Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Portnoi et al. discloses a laser with spaced apart Bragg reflectors having different phases.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (703) 305-4396.

The examiner can normally be reached from 8:00 AM-4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


EDDIE LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Matthew C. Landau

Examiner

September 19, 2002